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LECTURES.

MELANODERMA: A CLINICAL LECTURE.

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Gentlemen, — I show you this morning a woman whose face is largely covered with stains of irregular shape, the color of which varies in intensity from a light yellow to the deepest shade of brown. You have had opportunity recently of seeing in one of the wards a man whose face and other parts of the body were of a uniform dusky hue, and last week I called your attention to three young boys, brothers, affected with tinea tricophytina, whose faces appeared thickly bespattered with small yellowish and brownish spots. These are all cases of abnormal pigmentation.

You all know how manifold are the colors of the human skin; how it varies in the different races of mankind from ivory to coal, with infinite intermediate neutral shades and the warmer tints of yellow and red, which combined give such beauty and richness to the complexion that the painter with all his colors in vain tries to imitate it. Yet when life has gone, and we seek with the aid of the scalpel, the microscope, and chemistry for the materials which have given such freshness of bloom, delicate transparency, and changing brilliancy to the face of the young girl, we find only pallor and a few minute granules of a dark pigment in the cells of the skin. All the beauty of color faded with life as the blood ceased to flow, and it is to the vitalizing presence of this fluid and its varying conditions and volume that the richest colors of the skin are due. Besides it we find only the nearly colorless epidermal cells and corium, the yellowness of a little fat, and more or less, as stated, of a black pigment matter. This pigment, however, is the cause of the great diversity in hue of the various races of mankind and of the different parts of the body, according to its amount and distribution. The fairest skins will show in adult life some darkening in certain localities, while in some persons such coloring approaches that of the blackest African. The seat of this pigment is the cells of the rete mucosum, which contain a finely granular and homogeneous coloring matter arranged about the nuclei; in the lowest cells alone of parts slightly colored, but distributed throughout the whole cells of darker tint, and in several layers in those most darkly tinted. The cells of the horny layer are either free from color, or are of a faintly yellowish tint over parts thus colored. In the negro and other colored races the corium is wholly free from pigment, as in the white nations, the overlying mucous layer containing in its deepest layers of cells between the papillæ the entire coloring matter, fading out into brownish and yellowish or complete transparency as they approach the horny layer, which has sometimes also a yellowish hue. Examined by the microscope the pigmentary matter is sometimes found to assume a crystalline shape, rhombic tables with sharp angles, though generally in the form of fine granules. It is insoluble in water, ether, alcohol, and acids, but boiled in potash it forms a brown solution, and loses its color when heated with chlorine. Ignited it leaves an ash which contains a considerable amount of iron, which, with other circumstances, leads to the belief that it is a metamorphosed hæmatoidin or blood pigment.

The so-called chromatogenous or pigmentary affections of the skin are chiefly variations in the amount and distribution of the normal coloring matter over its surface. They may be divided into three well-marked classes: (1.) An excess of pigment, general or local. (2.) A deficiency of pigment, partial or general. (3.) The presence of pigment of an abnormal or extraneous character.

The first class alone will engage our attention to-day.

It would seem to be necessary at the start to establish a normal standard, by reference to which we may decide whether an individual case deviates far enough to be considered disease. This, however, is impossible so far as the general coloring of the body is concerned, for even among the white Latin races whole nations inhabiting subtropical latitudes approach the blacks in depth of color, and the palest Saxon stock furnishes a large percentage of dark-skinned families. It is evident, then, that each individual must find in the general color of his skin his own standard, and that variations from this in different periods of life or portions of his body constitute the affections we are about to consider. Changes in color of some parts do take place, however, which are not to be looked upon as abnormal, but as occurring at certain times and in some individuals in the course of nature. Such are the darkening of the genitals in mature life, amounting at times to the deepest shades of brown; the duskiness of the skin about the anus and axillæ in adults, and the deposition of pigment about the nipple and along the linea alba in the female during pregnancy. These changes, as I have said, are natural processes, but anatomically they differ in no way from the affections to be considered; they are simply an excess of the normal pigment in the Malpighian layer in such parts under the action of physiological laws.

The simplest deviation from the normal condition of the pigment is its excessive development upon such parts of the skin of many persons as are exposed to the weather, which we call *tanning*. It is not the direct rays of the sun that are the exciting agent in this change, for a few hours' exposure to sea air and fog, even when the sun is obscured, will produce a marked alteration of color upon some persons, and there seems to be a difference of tint in the faces of the sailor and of the outdoor laborer on shore. It is astonishing how rapidly and to how great an extent the pigment is developed in some skins under exposure, as witnessed on the necks and arms of the fairest oarsmen and ball-players at the end of the season; a few months only being sufficient to develop a hue as swarthy as that of the darkest Latin nations, and suggesting what cycles of a tropical sun might do and may have done in painting the various races of mankind. Tan and sunburn, it must be borne in mind, are two distinct processes, though produced by the same cause, the latter being a temporary congestion or erythema of the skin, and in no way primarily connected with the pigmentary system. They may occur simultaneously, but often the skin which "burns" easily does not tan readily, and *vice versâ*. Frequent burning, however, like all congestions, is apt to develop an excess of pigment in parts thus oversupplied with blood according to a well-known law. Ordinary tan generally disappears spontaneously during the winter in our latitude of strong extremes, where the cold outrules the heat, and where all warmth of color both in animal and plant fades out with departing summer. In our Southern States, peopled by the same original Anglo-Saxon stock as ourselves, the hue of the skin is several shades darker than our own, and the shorter winter exerts but a mild bleaching influence upon it. There, too, miscegenation has given us ample opportunity of studying the effect of dilution upon the intense blackness of the negro race, and although a single cross is found sufficient to diminish this to a great extent, it requires many successive intermixtures to deprive the cells of the rete of all their native pigment.

Freckles. — In this condition, called by some writers ephelis, by others lentigo, the pigment instead of being increased uniformly over the general surface of exposed parts, as in tanning, is developed in excess in the form of small spots of circular or irregular outline, varying in shade from a light yellow, through red, to the darkest brown. Single spots seldom exceed a pea in size, but by grouping or confluence patches of considerable area are sometimes formed. They occur mostly on those portions of the body exposed to the air, as the face, neck, and backs of the hands, and chiefly upon fair skins. They attain their highest development in red-haired persons, sometimes disfiguring their faces as with a uniform mask of a deep orange color, while elsewhere such skins are peculiarly white and transparent. Freckles are by no means, however, ranged about the nuclei; in the lowest cells alone of parts slightly colored, but distributed throughout the whole cells of darker tint, and in several layers in those most darkly tinted. The cells of the horny layer are either free from color, or are of a faintly yellowish tint over parts thus colored. In the negro and other colored races the corium is wholly free from pigment, as in the white nations, the overlying mucous layer containing in its deepest layers of cells between the papillæ the entire coloring matter, fading out into brownish and yellowish or complete transparency as they approach the horny layer, which has sometimes also a yellowish hue. Examined by the microscope the pigmentary matter is sometimes found to assume a crystalline shape, rhombic tables with sharp angles, though generally in the form of fine granules. It is insoluble in water, ether, alcohol, and acids, but boiled in potash it forms a brown solution, and loses its color when heated with chlorine. Ignited it leaves an ash which contains a considerable amount of iron, which, with other circumstances, leads to the belief that it is a metamorphosed hæmatoidin or blood pigment.

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There is another form of pigment spot upon the skin closely allied to freckling, which, too, has been called sometimes lentigo, sometimes ephelis, by different writers. They are both included by Hebra under the common term lentigines. The pathological process is the same, — an increase of pigment development in the form of circular spots. These spots differ, however, from freckles in several respects. They are much fewer in number, more isolated, often solitary. They are much larger, too, varying in size from a pea to two inches or more in diameter. They occur most frequently as single circular or oval patches, of a light yellow or buff color and sharply defined outline. They appear, too, at an earlier age, often soon after birth, and without apparent connection with exposure of the part affected to the air or sun. They affect chiefly the temples and back of the neck, but may show themselves upon any part of the body. They change little with the season, and generally persist for years or a life-time. Like freckles they are accompanied by no alteration in the surface cuticle, and are in no way connected with the condition of the general economy. Of their cause we know nothing.

Chloasma. Melasma. — These, too, are terms which are used with indifferent or diverse meanings by various writers on dermatology, the former being employed by some to designate merely the discolorations upon the face commonly called moth patches, while others use it as a general term to cover all extensive forms of melanoderma, whether local or universal. Hypertrophy of pigment over extensive portions of the body arises from a variety of direct causes, or may be symptomatic of several constitutional affections. In the first class are to be included all those forms which follow active or long-continued congestions of the skin, of extraneous origin. Any cause which excites a repeated or prolonged hyperæmia in the skin induces a more active formation of the pigment cells in the rete; therefore in the chronic exudative processes the parts affected assume a darker hue than natural. We see this especially in lichen ruber, in which the affected skin becomes as dark as a mulatto's; in psoriasis; in eczema, about the ankles especially, where the circulation is naturally most sluggish, etc. The same result follows the direct action of any stimulant upon the skin, a blister or even a sinapism being sufficient to produce a dark stain when applied upon some persons, which may fade away very slowly, or even never wholly disappear; a possible result too often forgotten by those who order them upon parts exposed to view. Many a woman is prevented from dressing *décolletée* through the negligence or ignorance of her physician upon this point. The process of tanning first mentioned is caused by the slight and repeated congestions of the skin on exposure to the sun's rays. Scratching, too, if practiced constantly and for long periods, is capable in the same way of producing most intense grades of pigmentation. Individuals of the dirty Slavic races of the Austrian empire, who seek relief in the Vienna hospital from a life-long plague of body lice, are sometimes almost as black as the darkest negroes from this cause alone, the skin being kept in a state of perpetual hyperæmia through the bites of these animals and the action of the nails. So, too, long-continued pressure upon any part, by producing passive congestion or stasis of the cutaneous circulation, will give rise to quite deep stains.

Such forms of melanoderma are easily understood, — increased vascularity of the papillæ, increased production of pigment cells in the rete. They are the result of direct causes, and in no way connected with any fault of the general economy. With the so-called symptomatic forms, however, it is otherwise. They are either associated indirectly with serious alteration of the deeper cutaneous tissues in certain rare affections of the integument, or they accompany those grave changes in the general condition of the body we call cachexias. Of the first variety the diffused discolorations which form so conspicuous a feature in most cases of scleroderma, and the more localized pigmentation about the circular patches of morphœa, are striking examples. Of the latter the best illustrations are furnished by the smaller pigment stains in the course of phthisis; by the more general dusky hue of the skin in persons subjected to the long-continued action of the malarial poison; and by that intense bronzing or blackening, more or less universal, which is one of the most prominent manifestations in that mysterious group of symptoms we call Addison's disease. To these the French would add another variety, *la cachexie par privation*, — that condition of advanced debility or physical neglect dependent upon prolonged destitution, in which the body and skin receive no care whatever, and which may well be called the affection of misery, or vagabond's disease. Such forms of melasma are rarely seen with us, but in foreign hospitals examples drawn from the habitual pauper classes are not uncommon. Their position, however, in this group is questionable, because in all of them it will be found that the skin has been through life subject to the irritation of clothes' lice; that in reality pediculi are the prime factor in the pigmentary change. They should be regarded, therefore, rather as instances under the first or idiopathic group. We know almost nothing of the ætiology of these latter affections. The visible coloration is due, as in the former group, to excessive formation of the pigment cells in the rete alone, although not the result of antecedent hyperæmia or stasis; but this hypertrophy is not confined to them, for pigment is found in some of them deposited also in the tissues of the cutis along the course of the blood-vessels, in the mucous membrane within the mouth, in the interior of the eye, in the spleen, etc. Writers, as you know, have assigned such pigment formation to changes in the suprarenal capsules, to disturbances in the vaso-motor or sympathetic nerves. The first of these theories is disproved entirely by extended observation; the latter rests upon pure assumption. Whenever, in studying the pathology of cutaneous diseases, you find this term "neurosis" held up in explanation of their origin, you may generally regard it merely as a fashionable word signifying utter ignorance.

But the most common example of such hypertrophy of pigment is that local form which is commonly called moth, the chloasma uterinum of Hebra. As its name implies, its favorite seat is upon the face of the female sex. It generally begins to show itself upon the forehead, just below the edge of the hair, with a sharply defined arched outline above, while below the discoloration encroaches upon the skin in an irregular manner, the intensity of coloring also diminishing towards the lower and central portions. The stain may cover the whole forehead, and it tends to spread downwards laterally upon the temples and beneath the eyes, or directly downwards upon the nose. In extensive cases the mouth, too, is often encircled. The tint varies from a light buff to the darkest brown, changing from time to time in intensity, and appearing lighter on days when the patient feels strong, darker when depressed or during the menstrual period, according to the freshness and amount of blood in the underlying cutaneous tissues. Always chronic, it advances and recedes at intervals without any regular law of development that can be ascertained. The surface of these patches is always smooth and normal. We know very little of the predisposing causes of chloasma. It occurs most frequently in women between the age of twenty and the cessation of menstruation, and in those who suffer from derangement of the sexual functions, or who are anæmic or debilitated from other causes. It does, however, affect women who are apparently healthy in all respects, and rarely the faces of men. Although so often apparently dependent upon functional disturbances, when once developed it is slow to disappear, even when the health of the patient is fully restored. It may, on the other hand, vanish spontaneously. It may not be unnecessary to add that in spite of one of its popular titles it is not connected with the liver.

Treatment. But how should we treat the three cases first cited as illustrating the most important types of melanoderma? We have in all of them, lying in the very deepest layers of the epidermis, an excessive amount of the natural pigment matter: in one patient scattered over the face alone in the form of small spots, in another distributed in large uniform patches over the same part, in the third widely diffused over large tracts of the surface of the body. The problem is the same in all of them, — the freckles, the chloasma, the general melasma: How shall we make it disappear? We cannot destroy it, for, as we have seen, it is indestructible, except by chemical agents so powerful that they could not be used upon the skin. We cannot cause it to be directly reabsorbed by any external means within our knowledge, although capable of spontaneous involution. We are able to influence its existence to a very slight extent only by internal remedies when its presence is dependent upon conditions of debility, misery, etc., which are themselves in some measure under such control. Can anything, then, be done to cause its removal? You will see numerous remedies advertised in the public prints and by irregular practitioners for the cure of freckles and moth patches, some of them widely known and extensively sold for this purpose. Such remedies do not usually attain so great popularity without some element of positive activity, but their measure of real virtue need not be large to insure a commercial success. They hit now and then just the class of cases in which they or almost any remedy cannot fail to benefit, and this is enough to outweigh the countless unknown failures and to perpetuate their reputation. The preparations of this sort ordinarily used in these affections have been taken from our own therapeutics.

We know that the cells of the rete formed by the papillary layer of the corium become in time the flattened horny cells of the outer cuticle, and are cast off in the natural and imperceptible process of desquamation. We know that those which contain the normal pigment share the same fate, and are being constantly reproduced. It is evident, therefore, that if we should remove the epidermis down to the corium by any means we should remove also the coloring matter. Now this may be done by the application of any irritant powerful enough to cause a separation by the process of inflammation of the two layers of the skin. This separation, the result of the effusion of serum in considerable quantity from and above the surface of the papillæ, we call vesication. It may be brought about by the use of so-called blisters, or by strong solutions of corrosive sublimate, etc. If we should raise such a blister over one of these patches of chloasma upon the young woman's face, we should see after the protecting crust had fallen that we had a new epidermis, red to be sure, but free from perceptible pigment matter. Erelong, however, we should probably find the pigment cells forming again in excess, and the part gradually reassuming its dark tint. Such violent measures, therefore, are not warranted by permanency of results, even if patients would submit to the suffering and considerable temporary disfigurement inseparable from their action. What we can hope to accomplish must be by the more or less constant application of such agents as will so hasten the natural process of desquamation that the pigment cells shall not have time to accumulate in sufficient amount to produce perceptible staining, and yet not cause enough local excitement to prevent daily use or attract observation to the part. The immediate local action should not exceed a slight roughening or scaliness; it should not be allowed to provoke redness or papulation. A considerable number of substances have the power of thus expediting the formation and discharge of epidermal cells by their action upon the surface of the skin. Among them are borax, sulphur, bismuth nitrate, alkalies, acetic and citric acids, etc. They may all be made to gradually lighten up these over-pigmented portions of integument by frequent and long-continued application. For the milder forms of melanoderma they will in variable measure be found of service. For our cases of freckling, for instance, we may apply at night any of the following formulæ, taking care that they are used cautiously until the susceptibility of the individual skin is properly tested. As freckles are generally much more pronounced at one season than another, the remedies need not be used so continuously as in the other varieties.

℞	Hydrarg. am. chlor.,		
	Bismuth. magist.	āā ʒ ij.	
	Amyli,		
	Glycerin	āā ʒ ss.	M.
℞	Acid. citric.	ʒ i.	
	Aquæ	℥ iv.	M.
℞	Ammon. muriat.	ʒ ss.	
	Aq. colonien.	℥ i.	
	Aquæ	℥ viij.	M.
℞	Zinc. sulph.	℈ i.	
	Ung. ros.	℥ i.	M.
℞	Hydrarg. bichlor.	gr. vi.	
	Acid. mur. dil.	ʒ i.	
	Aquæ	℥ iv.	
	Alcohol,		
	Aq. ros.	āā ℥ ij.	
	Glycerin	℥ i.	M.

These should be applied over night, and the skin should be thoroughly washed with soap in the morning. They must be used at least for weeks in succession, and resumed whenever required.

For chloasma, the form exhibited upon the face of this woman, a large number of preparations of these and other substances have also been advised, but there is one which surpasses all others in efficacy, one which I always use, — corrosive sublimate in solution. Its action can be most accurately regulated by adjusting the strength of the solution to the susceptibility of the skin in each case. Alcohol is a better solvent than water, because, as it evaporates more quickly, the solution is not so likely to run down upon the contiguous parts; and, as the patches are often abruptly defined, this is of some importance. A solution of four grains to the ounce is usually well borne, and will be found to be the best working strength. It is to be painted with a small camel's-hair brush over the pigmented patches at bedtime, a single application only the first two or three nights. Afterwards, if not too stimulating, a second or even a third painting at intervals of a few minutes may be tried, and will generally be well borne. Occasionally a skin will be met with that will bear a repetition of this process in the morning even. Our limit of immediate action should be, as already stated, a roughening of the surface from devitalization of the external layers of epidermal cells. Excessive stimulation will be shown by a reddening of the parts, persistent through the day, an increasing sensitiveness during the application, or even a papular eczematous efflorescence upon the part. Should such results occasionally follow, the remedy is to be suspended until the overaction subsides. Every morning the parts should be washed with soap and water, and, if the skin will bear the additional stimulation, pumice soap may be used with advantage upon a coarse bit of linen for the removal of the dead scales. By these means constantly employed we notice, as weeks go on, that the dark patches become lighter and lighter, and finally, in periods varying greatly in individual cases, not always in direct proportion to the intensity of coloring, assume the normal hue of the surrounding skin. In some cases, however, we do not succeed in causing the discolorations to wholly disappear, but must remain content with a great reduction in the discoloration. These results, moreover, are made permanent only by the continued use of the remedies as long as the pigment cells show a tendency to excessive reproduction. You may be asked, Is it safe to employ for long periods so strong a solution of a soluble salt of mercury? is there not danger of absorption to a serious amount? You may safely answer in the negative. An ounce of the preparation applied in this way over the ordinary moth patches upon the face will last a long time, and can be absorbed only in infinitesimally small amount. In general melasma its use might indeed be unsafe.

In all the diffused forms of melanoderma, as in the third case cited, local treatment, excepting upon parts exposed to view, is always impracticable, and internal medication only indirectly of benefit.

A CASE OF VICARIOUS MENSTRUATION.

BY GEORGE E. PUTNEY, M. D.,
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THE patient is a laundress; she was born in New Hampshire, is twenty-four years old, and single. Her catamenia began at nine, were characterized by moderate molimina, considerable flow, recurred regularly every four weeks, and continued three days.

During the summers of 1874 and 1875 it was her custom to spend about one hour daily in a public bath, regardless of her catamenia. One day after the usual bath her menstrual flow suddenly and prematurely ceased; at the same time she was attacked with vertigo, distressing pains in the stomach and bowels, and palpitation of the heart. These symptoms, however, soon passed away. In four weeks she began to have lassitude, an inordinate craving for food, lancinating pains throughout the abdomen, with more or less tormina, followed by a sense of fullness of the stomach, pains extending from the temples to the vertex, fœtid breath, bad taste, and nausea. The latter symptom was quickly followed by her vomiting about a pint of dark grumous blood and ingesta. After the vomiting there was considerable prostration and febrile movement, which with the earlier symptoms gradually abated, and in three days left her "as well as ever." For two years these attacks of hæmatemesis continued to recur about the last of every month, preceded and followed by substantially the same train of symptoms that characterized the first. There was generally a slight amount of dysuria, which, however, disappeared with the other symptoms. The alvine dejections were normal, so far as could be ascertained.

There were no known hereditary tendencies to disease, neither had the patient ever been seriously ill. When first seen by the reporter, she complained of fleeting pains in the chest, poor appetite, and malaise, but her general appearance was good.

An examination of the heart revealed nothing remarkable; neither did percussion nor auscultation of the chest elicit any but normal sounds.

There was no tumor or undue tenderness detected in the epigastrium.

The patient was given tonic treatment, and soon after left the institution, but returned a few weeks since, and now reports that seven months ago, while taking wine and iron, her catamenia returned, and have since recurred regularly, unaccompanied by any abnormal symptom. A physical examination resulted as before. She is in excellent health, and weighs thirty pounds more than she did one year ago.

JULIUS CASSERIUS.

BY D. HUNT, JR., M. D.

THE recent anniversary of the birth of Harvey has called forth a noble plea for experimental investigation which it is to be hoped will be read by every physician. I refer to the article entitled William Harvey which Huxley has published in the *Fortnightly Review*, and which was reprinted in the March supplement of *The Popular Science Monthly*. Harvey's claims to the gratitude of mankind, and particularly to that of our profession, are admirably displayed, and the lesson which his life teaches is so forcibly demonstrated that it acquires almost a new value. It lessens our pride to think that our manner of studying medicine contains so little of this experimental method which Huxley thinks has done so much for the world; to think that it even furnishes so little of the culture necessary to fit us for the exercise of this method in the long years of waiting that must elapse between graduation and a full practice. Still it may be wholesome for us to reflect that our "practical" standard is a very low one, and that, without dreaming or sentimentalizing over an ideal, the world offers us models of a much better application of these experimental methods than any which our wisdom has led us to imitate. An immediate corollary of this thought is that new buildings and longer courses of study are not of so much importance to us as a thorough and radical overturning of the system that crowds our students with lectures to such an extent that they have no time for the essentials of medical education. More than this, the article itself is a practical illustration of the value of medical history. Times change, but human nature is much the same as Shakespeare found it; Harveys and Riolans, Asselis and Helmonts still exist, and history can only show us to what extent these different types of men may bless or curse our science. It seems that there were, as there now are, three types of men, as far as their manner of working is concerned. In Harvey we see the patient seeker for truth, — patient in the consciousness of working for the future; in Riolan we can see the busy, selfish worker, with just enough of "distant vision" to be concerned for his epitaph; while in the hosts of the "practical" men of their day we see the throngs who are busied with the present. History alone can teach us to honor and imitate the one class while it enables us to assign a just value to the others; more than this, it alone may give us the clews that we need in shaping our policy in educational matters, — a policy the results of which will reach far into the future. History may also serve the ends of justice in adjusting the confusion and mistakes of one period in the clearer light which time sheds upon events that have long since happened. It is this latter function of history to which, incited by the reference to Spigelius in the article by Huxley, I would devote a few lines concerning Julius Casserius Placentinus, a name that has received too little honor in the annals of medicine. Chance has left his fame in a great measure to a department of medical history that has been relatively but slightly cultivated. I refer to the bibliographical and artistic branches. This has happened as follows: When Fabricius ab Aquapendente, the professor of anatomy and surgery in Padua, vacated his chair in the university he was succeeded by his pupil and most illustrious rival, Casserius, who had long been engaged in the attempt to produce an anatomy worthy of his age. To accomplish this purpose Casserius had engaged the services of Fialetti, a pupil of Cremonini and Tintoretto, as draughtsman, and Franciscus Vallesius, one of the best engravers of the age, to furnish plates for the work. Unfortunately, Casserius died before the text was ready, and Spigelius, who succeeded to the chair, was soon by the same fate prevented from completing his labors, yet not until he had enriched medical literature by several important contributions. Spigelius made Daniel Bucretius (Rindfleisch) his literary executor, and particularly enjoined upon him the publication of his anatomy in ten books. During the time that Bucretius was employed in preparing these labors of Spigelius for publication he came into possession of the plates of Casserius, and in the same year that he published the anatomy of Spigelius (1627) he published them with explanatory notes, but without text. The two works were, however, so arranged that they complemented each other, and they were soon united.[1]

This union was rather injurious to the reputation of Casserius, for the plates and their history were nearly forgotten, and although the name of Casserius was generally mentioned in connection with them, they were commonly regarded as parts of the works of Spigelius. There can be no doubt that they represent the second great epoch in the history of modern anatomy, counting the work of Vesalius as marking the beginning of its history. Sprengel cites as an instance of their value that they represent the so-called aqueduct of Sylvius, and in the seventh plate (page 90, first edition) this structure is shown and thus plainly described in the explanatory text: " *Q. Q.* Nates divisi, ut ductus, qui sub ipsis latebat, conspiceretur. *R.* Ductus posterior tertii ventriculi in quartum tendens, apertus."

The same irreverence that was attached to merely pictured facts may have actuated Johannes Browne when, in 1683, he published his anatomy with thirty or more plates copied from those of Casserius.

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[1] I have not seen a copy of one of the 1627 editions so united; I state the fact upon the authority of Möhsen (Verzeichniss einer Sammlung von Bildnissen grössentheil berühmter Aertze. Berlin. 1771.) My own editions are: first, the first edition of 1627, with the title-page which distinguishes it; second, the edition of Casserius and Spigelius, published by Vander Linden, 1645, which contains Harvey's account of the discovery of the circulation and Aselli's description of the lymphatics; third, a German edition of the plates of Casserius published at Frankfort in 1656 (small quarto).

But it was not my intention to do more than call attention to the fact that when we speak of the works of Spigelius we almost always include the plates of Casserius without thinking that the author of the plates probably deserves more honor than the worthy author of the text. Justice requires that these facts, upon which medical history is usually silent, should be remembered, and that we should not permit the name and merits of one of the greatest anatomists to be buried in the works of an author who, judging from his life, would have been the first to have protested against the injustice.

RECENT PROGRESS IN PHYSIOLOGY.[1]

BY H. P. BOWDITCH, M. D.

MUSCULAR CONTRACTION.

VOLUNTARY muscular contractions have generally been regarded by physiologists as resulting from the fusion of a rapid series of muscular twitches,[2] such as are caused by a single induction shock applied to a motor nerve or to a muscle. A strong argument in favor of this view in the minds of the earlier physiologists was the fact that they were unable to produce artificially a persistent tetanus resembling a voluntary contraction in any way except by a series of irritations following each other in rapid succession. In accordance with this theory the trembling of the muscles resulting from age, disease, or exhaustion was considered to be due to the impulses from the central nervous system following each other with a rapidity insufficient to produce a complete fusion of the separate muscular twitches.[3]

Du Bois-Reymond's[4] investigations into the electrical phenomena of nerves and muscles lent force to this theory; for he was able to show that a "negative variation" of the normal muscle current is a necessary concomitant of muscular activity, that it is sufficiently intense to act as an irritant to a nerve placed upon the surface of the muscle, and that a nerve thus irritated produces in the muscle belonging to it a condition of contraction corresponding to that of the primary muscle. Thus, if the primary muscle is caused to twitch by a single induction shock applied to its nerve, the second muscle will also twitch in consequence of the irritation of its nerve by the "negative variation" of the first muscle; and if a rapid series of induction shocks causes the first muscle to contract tetanically, the secondary contraction will also be tetanic in character. Du Bois-Reymond, therefore, concludes that *all contractions*, however uniform they may appear, may very likely be discontinuous in character, and, like the tetanus caused by the interrupted current, be composed of a rapid series of instantaneous effects.

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[1] Concluded from page 598.

[2] This word is used as the English equivalent of the German *zuckung* or the French *secousse*.

[3] See Ed. Weber in Wagner's Handwörterbuch der Physiologie, iii. Bd., ii. Abth., s. 12.

[4] Untersuchungen über thierische Electricität.

The observations of Helmholtz on the sounds produced in muscular contraction have, however, commonly been regarded as furnishing the strongest support for the theory that voluntary contractions are a fused series of twitches. This observer[1] found that when human or rabbit muscles are tetanized by an induction apparatus they produce an audible sound of a pitch corresponding to the rate of the stimulation, and, since voluntary muscular contraction is accompanied by a sound corresponding in pitch to thirty-six to forty vibrations in a second, he concluded that this natural tetanus is the result of periodic innervation. When he allowed the vibrations of muscles in natural tetanus to be communicated to steel springs or strips of paper whose rate of vibration could be varied by alterations in their length, he found that these vibrating bodies responded best to the movement of the muscles when they were so adjusted as to vibrate eighteen to twenty times in a second. Helmholtz, therefore, concluded that the sound of natural tetanus is the octave or first harmonic of the tone produced by the vibration of the muscle, the latter lying below the limit of audible tones. In a subsequent communication,[2] however, Helmholtz, after giving the result of his researches into the mechanism of hearing, states that the tone of natural tetanus can be raised about one note by an increased tension of the membrana tympani caused by rarefaction of the air in the tympanum of the observer, that it can be lowered and enfeebled by compressing the air in that cavity, and that the same tone can be produced by a gentle stream of air directed against the external auditory meatus. He therefore concludes that "the muscle sound is a resonance tone of the membrana tympani produced by the irregular vibrations of the muscles." How far this conclusion is to be regarded as inconsistent with his former assumption of muscular vibrations following each other with tolerable regularity at the rate of about nineteen in a second the author does not state.

In apparent opposition to the commonly received theory of the composite nature of a tetanic contraction is the fact, unknown to the earlier writers on this subject, that, while the effect of passing a continued current of electricity through a motor nerve is usually merely to cause muscular twitches at the beginning and end of its application, yet, under certain circumstances, either the opening or closing of the electrical circuit may be followed by a more or less prolonged tetanus. Whatever view may be taken of the causation of this so-called "opening" or

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[1] Verhandlungen des naturhistorisch-medicinischen Vereins zu Heidelberg, iv. 88, 1866.

[2] Verhandlungen des naturhistorisch-medicinischen Vereins zu Heidelberg, iv. 161, 1867.

"closing tetanus," it is evident that an intermittent irritation of the nerve can play no part therein.

In the hope of throwing light upon the question whether this apparently uniform tetanic contraction is really intermittent in its nature, experiments were undertaken by Friedrich, and reported by Hering in an article[1] from which many of the above references have been taken.

The method of research adopted was that of the above-described secondary contraction of Du Bois-Reymond. The author found in several hundred experiments that the "closing tetanus" was far more effective than the "opening tetanus" as a stimulus to a nerve lying on the muscle thus tetanized, and the secondary contraction was invariably a single twitch coinciding with the beginning of the primary tetanus. A secondary tetanus was never observed. The author does not, however, conclude from this result that the primary tetanus is not intermittent in its character. He points out that a tetanus produced by intermittent activity of the muscular fibres can give rise to a secondary tetanus only when the phases of activity of all the muscular fibres are synchronous, for only under these circumstances can the negative variation of the separate fibres cause a negative variation of the muscle current as a whole, and it is this variation of the total muscle current which irritates the nerve of the secondary muscle.

Although these experiments have not, therefore, decided the question whether the "opening" and "closing tetanus" are intermittent in their character or not, they are valuable as throwing light on the relation between the muscular contraction and the negative variation, for it was repeatedly found that a secondary twitch occurred while the primary muscle was apparently in perfect repose; for example, at the closing of a strong ascending current in the nerve of the primary muscle. From these results Friedrich draws the conclusion that sudden variations in the muscle current may occur unaccompanied by noticeable contractions. It seems, therefore, doubtful whether the negative variation can be regarded as such an inseparable concomitant of nervous and muscular action as was supposed by Bernstein in his theory of nerve and muscle activity.[2] Friedrich also applied the same method of research to the tetanus produced by strychnia, and found that when the primary tetanus was irregular and spasmodic the secondary muscle executed a series of twitches; but that a uniform primary tetanus was accompanied, at its commencement only, by a single secondary twitch.

As early as 1862 Harless[3] noticed that voluntary or reflex contractions of frogs' muscles caused only a secondary twitch at the beginning of the movement, never a secondary tetanus. Even the violent tetanic contractions brought about by irritation of the spinal cord caused frequently only a secondary twitch, though much feebler contractions produced by direct irritation of a nerve trunk occasioned always a secondary tetanus.

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[1] Wiener Sitzungsberichte, lxxii., iii. Abth., December 30, 1875.

[2] See the JOURNAL, January 15, 1874.

[3] Zeitschrift für rationelle Medicin, iii., Reihe xiv. 110.

From all these considerations it is evident that the theory of the composite nature of voluntary muscular contraction rests on a much less secure foundation than has generally been assumed by physiologists. In fact, if the muscular sound is to be regarded as merely a resonance tone of the ear, the evidence in favor of rhythmical muscular vibrations in voluntary contraction is reduced to the above-mentioned briefly recorded experiments of Helmholtz, with steel springs and strips of paper. On the other hand, there is in these researches nothing inconsistent with the assumption (for which the phenomena of artificial tetanus afford an analogy) that vibrations of this sort really occur.

Morat and Toussaint[1] have also investigated the electrical condition of contracting muscle by means of the secondary contraction. They find (as previously observed by Harless) that voluntary contractions produce a secondary twitch, and not a secondary tetanus. They also confirm the above-mentioned observations of Friedrich on the electrical condition of a muscle in "closing tetanus." They do not, however, doubt the existence of rhythmical muscular vibrations in voluntary contraction, for they find, in studying the secondary contractions produced by artificial tetanus, that a gradual increase in the rapidity of the stimulations which give rise to the primary tetanus causes the secondary tetanus to become shorter and shorter, till it is finally reduced to a twitch at the beginning of the primary tetanus. A similar effect is also produced by the gradual exhaustion of the primary muscle, the rate of stimulation being constant. The authors, therefore, conclude that the disappearance of the secondary tetanus is due to the more perfect fusion of the twitches composing the primary tetanus (this being an effect both of increased rapidity of stimulation and of muscular exhaustion), and that the reason why a voluntary contraction produces only a secondary twitch is to be found not in the absence of rhythmical vibrations, but in the complete fusion of these vibrations into one another. If this view be correct, it must be assumed that exhaustion causes a lowering and a prolongation of the wave of negative variation corresponding to similar effects in the wave of muscular contraction.

An interesting result of these researches is to throw doubt upon a conclusion, which has been generally accepted by physiologists, in regard to the nature of the cardiac contraction. From the fact that a frog's muscle, of which the nerve is laid upon the contracting heart of a dog or rabbit, produces a twitch and not a tetanus, it has been commonly assumed that the cardiac systole must be also a twitch. This assumption is of course no longer tenable in view of the above-mentioned observations, showing that under various circumstances tetanic contractions give rise to secondary twitches. At the same time the prolonged character of the cardiac contraction cannot be regarded as a proof of its tetanic nature. In fact, as Hering well observes, "it is impossible, at present, to draw a sharp distinction between the twitch and the tetanus, for the prolonged twitch forms the transition between the momentary twitch and the condition of tetanic contraction."

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[1] Archives de Physiologie, 1877, page 156.

C. S. Minot[1] has investigated the effect of exhaustion on tetanic muscular contractions. By means of a suitably arranged and complicated apparatus he sent through the gastrocnemius muscle of the frog a known number of secondary induction shocks per second, so as to produce every half minute a tetanus of four seconds' duration followed by twenty-six seconds' repose. This succession of short tetanic contractions was recorded upon a revolving cylinder in a series of curves, from which the conclusions were drawn. Minot found the height of the contractions to increase at first, although the stimulus remained constant, and, knowing that Kronecker, Tiegel, Rossbach, and others had observed in certain cases a similar increase, he concludes that it is a constant phenomenon when the muscle is fresh. In other words, it may be stated that the irritability of the fresh muscle is increased by irritation.

Muscles are also found to be by no means perfectly elastic bodies. On the contrary, when their form is altered they do not return to their original length unless under the influence of some external force. When they contract they do not elongate completely unless some load stretches them out. Hence when the load is light (in the case of the gastrocnemius muscle of the frog less than twenty grammes) after each tetanus there remains a well-marked permanent shortening, which increases with each contraction until a certain maximum is reached. If the load be sufficiently increased, the muscle lengthens out between each two contractions. In the body it must be supposed that the action of antagonistic muscles performs the part of the load. Hence it is that when, as in some cases of paralysis, these fail the sound muscles contract and remain permanently shortened. The rate at which a muscle lengthens out after contraction diminishes as exhaustion progresses. Therefore in ordinary artificial tetanus, produced by a moderately rapid stimulation, the single induction shocks cause at first each a distinct contraction, but as the lengthening out grows slower they fuse together. This prolongation of the descending portion of the curve of muscular contraction, which changes a succession of twitches into a tetanus, is regarded by the author as due to incomplete elasticity of the muscular tissue, to which property, therefore, a fundamental importance is attributed. Among the other subjects connected with muscular contraction, which are discussed by the author, may be mentioned the observation that by putting a heavy weight on a muscle for a few seconds it is possible to produce a permanent elongation, which, however, may be obliterated by a contraction. In other words, the contraction and the stretching of a muscle are directly antagonistic processes. The effects of excessive work and of prolonged repose were also studied, especially in their bearing upon the exhaustion of muscles.

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[1] Journal of Anatomy and Physiology, xii., part ii., 297.

PROCEEDINGS OF THE NEW ENGLAND PSYCHOLOGICAL SOCIETY.

B. D. EASTMAN, M. D., SECRETARY.

At the meeting of the New England Psychological Society, held at Worcester, March 12th, Dr. Stearns, of the Hartford Retreat, read a paper on the Relations of Insanity to Civilization. He affirmed that insanity was unknown among the American Indians, and rare with natives of the Pacific islands before their civilization. It has also largely increased among the negroes of the South since the war. A higher ratio to the population exists in Europe and the United States than ever before. He did not regard civilization and insanity as cause and effect, but thought that certain conditions incident to the former tended to an increase of the latter. Of these causal conditions he mentioned imperfect and vicious education, sudden wealth, distaste for labor, loss of easily acquired property, lack of mental discipline, segregation in cities, ambition among a rural population to approximate the luxuries of city life, improper diet, too little sleep, and sensual excesses.

In speaking of the hurry and rush of our century, he said that it began at school, and produced hastily educated and inharmoniously developed graduates, unfitted to carry on the duties of life in a moderate, healthful, and successful manner; mental and physical degeneracy was the result. He stated that general paralysis was uncommon in certain agricultural districts in England until sudden prosperity brought the means of physical indulgence. The insane he regarded as the abortive blossoms and windfalls of society, and in no strict sense essential products of civilization.

Dr. Fisher spoke of the growing tendency to crowd the professions. He had seen it stated that over a million and a half of persons were registered in England as professionals. In the United States there is one physician to every six hundred[1] of the population, while in Germany there is but one in three thousand. Statistics show that while the ratio of the insane to the whole population, in England and Wales, has continued to increase since 1859, the increase in 1875 was the lowest for many years, namely, one thousand one hundred and twenty-three, and hopes had arisen that the highest ratio had been reached.[2]

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[1] See Introductory Address by Prof. Wm. Pepper, Philadelphia, 1877.

[2] The last report of the commissioners in lunacy shows that the increase in 1876 was the highest since 1869 namely, one thousand seven hundred and twenty. The general population augments at the rate of one and one half per cent., while the registered insane and idiotic increase at the rate of three per cent. — T. W. F.

Dr. Draper remarked that one person in six hundred was insane or idiotic in the United States, — just the proportion of physicians to the population.

Dr. Shew said that statistics would show a larger proportion of insanity among the illiterate than among the educated. He thought that a symmetrical education prevented insanity, and that mental disease apparently from over-study was due in part to other causes; also that the increase of insanity among negroes was due to new responsibilities which they were unfitted suddenly to assume.

Dr. Brown remarked that many children have no childhood. Sons of farmers are ambitious to complete their education early and begin to get a living. In this country we try to accomplish at twenty one or two what in England would occupy the time till twenty-five, or even thirty. He thought the requirements at Harvard too exacting. While respecting the ambition of farmers to educate their children and advance their style of living, he was of the opinion that the rural as well as the civic population should go slower.

Dr. Lathrop regarded the standard at Harvard as not too high considering the optional studies.

Dr. Earle said that he had been unable fully to account for the smaller ratio of insanity among brain workers. Dr. Tuke informed him that he was writing on the subject, and would be glad to get statistics from the United States. The first census in which account was taken of insanity in this country was in 1840. That census is very unreliable in respect to the negro insane, very few being returned from the slave States, while in New England insane negroes were purposely registered in large numbers from towns having no negroes at all.

Dr. Knight said that the insane slaves before the war were kept on the plantations from motives of economy. They have since become public charges, which accounts largely for the sudden access of insanity. Insanity has increased in Connecticut from seven hundred and fifty in 1864 to one thousand one hundred in 1877, with very little addition to the population.

Dr. Russell examined during the war the brains of eight hundred negroes. He found the average weight less by two and one half ounces than that of whites at the same age. He also observed that negroes seemed to be almost exempt from fatal cerebral disease.

Dr. Walker remarked that general paralysis, though well recognized twenty-five years ago, was then rarely seen in the Boston Lunatic Hospital. He thought it had increased largely, and that melancholia had also become extremely common, especially of late.

Dr. Eastman considered parents more at fault than teachers in the matter of over-study.

At the evening session resolutions were passed referring to the death of Dr. Tyler, which have already been published in the **Journal**.

Dr. Eastman read a paper giving some statistics of eighty-one cases of general paralysis observed by him in the last five years.

ALTHAUS ON DISEASES OF THE NERVOUS SYSTEM.[1]

THERE is still plenty of room for good books, scientific and clinical, upon diseases of the nervous system, though we look with more anxiety at the announcement of comprehensive treatises than at that of monographs; for, so vast and so difficult is the subject that a man to be abreast of all departments of it needs to be not only a good pathologist and clinicist, but a good metaphysician as well, combinations which are rarely met with.

In the same proportion, however, that good books upon this interesting and obscure subject are welcome, poor and indifferent books are unwelcome, and it is in the latter if not the former of these two classes that the volume before us is to be ranked.

The work is divisible, not anatomically, but, so to speak, physiologically, into two portions, one of which is a restatement of our knowledge with regard to the matters in hand, while the other contains original, mainly statistical observations.

The first portion is better in but few respects than other special English treatises on the same subjects, not to speak of those recently translated from the French and German, while it is inferior to them in many points. Brevity is obtained at the sacrifice of completeness and clearness, and simplicity at the sacrifice of accuracy. Nor do we find the other portion worthy of higher praise.

Imposing as is the number of cases — nearly a quarter of a million — which the writer culls from the annual reports of the registrar-general for England and Wales, the important inferences which he draws from them as to rates of increase and decrease in the frequency of deaths from various "nervous" diseases since the year 1838 appear to us nothing less than proved.

Even to-day, so far are we from having an adequate and intelligible system of classification of these diseases, such an inquiry would have to be conducted with the utmost circumspection, and its results would be at best of but doubtful value; and shall we look for better things from the pathological information of the average Welsh physician in 1838?

But the nomenclature adopted in that year may speak for itself. We have: —

(1.) *Cephalitis*, which, in spite of its derivation, is made to include inflammations of the spinal cord and its membranes. (2.) *Hydrocephalus* (thrown out). (3.) *Convulsions, spasms*, or *fits*. (4.) *Apoplexy*, which includes cases of *severe cerebral hyperæmia* and *cerebral hæmorrhage, sunstroke*, and *acute intoxication by opium, alcohol*, and *other narcotic poisons*. (5.) *Paralysis, palsy*, the *paralytic fit, hemiplegia*, and *paraplegia*, a heading under which all manner of chronic cerebral and spinal diseases of widely different pathology are indiscriminately grouped together. (6.) *Delirium tremens*. (7.) *Tetanus*. (8.) *Chorea*. (9.) *Epilepsy*. (10.) *Insanity*. (11.) *Disease*, a compartment for cases not otherwise classified.

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[1] *Diseases of the Nervous System: Their Prevalence and their Pathology*. By JULIUS ALTHAUS, M. R. C. P., Senior Physician to the Hospital for Epilepsy and Paralysis, Regent's Park, etc., etc. New York: G. P. Putnam's Sons. 1878.

We obtain an indication of the amount of reliance to be placed on conclusions drawn from the examination of cases so classified when we read that the mortality from epilepsy (not "infantile spasms," which come under another head) is found to be very great in the first year of life, then to sink rapidly till the fourth year, between which and the fifth it mounts again abruptly. In 1874, of 213,799 deaths of infants under five years of age 26,534 were from "convulsions," a diagnosis as to the value of which as a basis for a scientific inquiry we may justly feel some question, especially when we find the next largest group, numbering 26,514 cases, set down as due to "atrophy and debility." We are also skeptical as to whether the gradual falling off in numbers of the "convulsions" mortality since 1838 is justly to be ascribed "to an advance in therapeutics," preferring to lay a part of it to an improvement in methods of classification.

In the chapters on eclampsia from lead poisoning we read that "lead, by its astringent effects on the blood-vessels, causes them to be constricted to such an extent that ultimately very little blood can pass through the cerebral arterioles," a theory which modern researches have long since disproved, or, to say the least, upon which they have thrown much doubt; and the whole range of questions in cerebral and spinal pathology are dealt with equally summarily and inexactly.

Meynert's "ganglia of the pes pedunculi" are made to include the cortex cerebri. "Inflammation of the middle portion of the dorsal cord" is said to be "also dangerous, the spinal canal being very narrow in that locality, owing to which the cord is more easily disorganized in its entirety."

A bit of light is let in upon the true value of the statistical evidence with regard to the mortality from insanity by the following sentence: "It will be seen that the deaths of all lunatics, as given by the commissioners in lunacy, do not at all correspond to the deaths from insanity recorded by the registrar-general, which is explained by the circumstance that in the former reports the deaths from the various forms of brain disease producing insanity are included."

Although the writer is by birth a foreigner, his English is generally excellent, though we think he might have found a better translation for *petit mal* than "the lesser evil."

It would, perhaps, not be difficult to pick out other points about the work which we could praise, but we do not feel called upon to do so, our undisguised object being to show that, as a whole, it fills no real gap upon our shelves, although it may occupy the place which, but for it, might later have been given to a better book.

SMITH'S PRACTICAL GYNÆCOLOGY.[1]

WHILE we do not consider a book like this of Dr. Heywood Smith's promotive of scientific work in the department of gynæcology, it is certainly a condensation of much knowledge into little space, well classified and indexed, and is, perhaps, the best one of its size on this subject which has come to our notice. The mechanism of the book, if we may so designate its convenient form and orderly arrangement, should not blind us to the fact that as one of the Students' Guide Series it is out of place, since it is necessarily so incomplete and superficial as to be worth little more to the student than a mere index or schedule. The preparation and use of such books should, it seems to us, be deprecated rather than encouraged.

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[1] *Practical Gynæcology: A Hand-Book of the Diseases of Women.* With Illustrations. By HEYWOOD SMITH, M. A., M. D. Oxon. Philadelphia: Lindsay and Blakiston. 1878.

Its value, as the author implies in his preface, must be to the general practitioner, who, too crowded to go over a subject exhaustively, will often be assisted by it to eliminate certain factors of disease and reach a diagnosis sufficiently approximate, at least, to determine whether the case requires the wider experience of the specialist.

On some subordinate matters the author dwells largely in detail; on the most important he is often correspondingly meagre. Chapter I., on Means of Diagnosis, as a whole, is very deficient for so important a subject. Elaboration is attempted in one or two particulars, as, for example, the method of making a digital examination; though, from the minute detail which it seems to furnish, it is surpri-ing that no mention is made of the proper preparation of the patient by the evacuation of the bladder and rectum, or of the bed or table on which such examination should be conducted. Contrary to the author, we must consider the dorsal position for digital examination much superior to that of the patient on the side. We are sure, too, that, for the more frequent examination of the interior of the uterus, the sound must give way to the probe passed through a speculum.

For granular inflammation of the lips of the uterus (page 73), Dr. Smith advises the use of potassa caustica, the actual cautery, or the solid nitrate of silver, treatment which is not only severe, but often productive of great harm. The cicatricial tissue which would follow the use of any one of these agents is pernicious in itself, and also tends to the occlusion of the os uteri, an injury which has frequently resulted from it.

In cases of utero-vesical fistula, the author would wait until the menopause, and then close the os uteri. We are surprised to find him content to rest here, and are sure that experienced gynæcologists, certainly those of this country, would be far from satisfied with his course of treatment. It has been our pleasure to see more than one such case cured without the delay recommended.

The portion of the book devoted to diseases of the uterus is particularly good for its conciseness and for the ease with which reference to it may be made. The references in Chapter II. to the effects of syphilis as a cause of uterine disease are also good. The directions for the safe employment of tents in dilating the uterine canal are excellent.

The illustrations are of little value. The heads and divisions throughout are clearly indicated. The author dedicates the book to his father, of whom he is rather eulogistic, though perhaps not to the extent of committing a breach of good taste. It is given to few of us to do original work; and if this book be not the product of ripe thought and personal experience, it at least comes from a man who, in the main, shows himself thoroughly conversant with the more recent advances in gynæcology.

ZIEMSSEN'S CYCLOPÆDIA, VOLUME XVII.[1]

NEARLY three fourths of this volume is devoted to poisons, which are discussed by Boehm, Naunyn, and Von Boeck. It is needless to say that these papers contain a vast amount of information, and that they present few attractions to the general reader. Boehm's task includes the chapters on alcohol, chloroform, and ether, which probably will be thought of greater interest than most of the others. We are disappointed with the discussion of alcohol; disputed questions are too lightly passed over, and though the clinical aspects of alcoholic poisoning are fairly described, the chapter on the treatment of delirium tremens is unsatisfactory. It reads like the graduation thesis of a diligent but dull student. This author's treatment of chloroform and ether reminds us strikingly of Sir James Simpson's article on Anæsthesia, in the Encyclopædia Britannica, which consisted of the words "vide chloroform," with the difference that Boehm gives several wrong impressions solely from his profound ignorance. He is aware that many more deaths have been reported from the use of chloroform than of ether, but this he says "is not so much due to the greater safety of ether, but rather to the fact that whilst the use of ether has steadily diminished that of chloroform has as constantly increased." His whole discussion shows that, although he has gone through a certain amount of cramming, the author has little practical knowledge of chloroform, and none of ether.

Immermann contributes three papers on the disease of bleeders, that is, hæmophilia, scurvy, and purpura hæmorrhagica, respectively, which constitute the most readable part of the volume. We have to protest against the new word "spatial," used by Dr. Ball, of New York. He kindly explains it on its second appearance, and we learn that "spatial frequency" is for some unknown reason to be preferred to "geographical extension."

CHEMICAL EXPERIMENTATION.[2]

As its title implies, this book is a description of experiments designed for the purpose of illustrating lectures upon inorganic chemistry, and of the apparatus necessary for their performance. The apparatus and frequently the method of performing the experiments are explained by numerous and excellent wood-cuts.

We know of no other work of the kind in the English language, and we have no doubt that this one will be received with favor by lecturers and teachers of chemistry on account of the large variety of experiments which has here been collected in a compact form. W.

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[1] *Ziemssen's Cyclopædia.* Vol. XVII. General Anomalies of Nutrition and Poisons. New York: Wm. Wood & Co. 1878.

[2] *Chemical Experimentation.* Being a Handbook of Lecture Experiments in Inorganic Chemistry. By SAMUEL P. SADTLER, A. M., Ph. D., Assistant Professor of Chemistry in the University of Pennsylvania. Louisville: John P. Morton & Co. 1878.

AMERICAN MEDICAL ASSOCIATION.

At the last meeting of the association, which was held in Chicago, Dr. T. G. Richardson, of Louisiana, was elected president, Dr. R. J. Dunglison treasurer, and Dr. William B. Atkinson permanent secretary. Buffalo was selected as the next place of meeting. The twenty-ninth annual session of the American Medical Association will therefore be held there this year, from June 4th to the 7th inclusive. A large attendance is looked for, and from the amount of deferred and new business already announced it is evident that the meeting will be one of more than usual interest. Dr. Thomas F. Rochester, of Buffalo, who is chairman of the committee of arrangements, has received reports from some of the presiding officers of the various sections, but the list is not sufficiently complete to definitely state the programme. We are authorized to say, however, that the papers will be unusually full and interesting. It was proposed last year to divide the surgical department, and add to the five existing sections one for ophthalmology, otology, and laryngology, which shall be known and designated as Section VI. The officers of the various sections, as now constituted, are as follows: —

Section I. Practice of Medicine, Materia Medica, and Physiology: Dr. A. L. Loomis, New York, chairman; Dr. J. H. Etheridge, Chicago, Ill., secretary. (Committee appointed to report to this section: On Clinical and Meteorological Records, Dr. N. S. Davis, Illinois, chairman.) Section II. Obstetrics and Diseases of Women and Children: Dr. E. W. Jenks, Detroit, Mich., chairman; Dr. H. O. Marcy, Cambridge, Mass., secretary. Section III. Surgery and Anatomy: Dr. Henry H. Smith, Philadelphia, Pa., chairman; Dr. E. T. Easley, Little Rock, Ark., secretary. Section IV. Medical Jurisprudence, Chemistry, and Psychology: Dr. Walter Kempster, Oshkosh, Wis., chairman; Dr. E. A. Hildreth, Wheeling, W. Va., secretary. Section V. State Medicine and Public Hygiene: Dr. J. L. Cabell, University of Virginia, chairman; Dr. E. J. Marsh, Paterson, N. J., secretary. The following committees are expected to report: On Prize Essays: Dr. E. M. Moore, Buffalo, N. Y., chairman. On Necrology: Dr. J. M. Toner, Washington, D. C., chairman. On Catalogue of National Library: Dr. H. C. Wood, Pa., chairman. On Recommendations in President Bowditch's Address: Dr. N. S. Davis, Illinois, chairman.

In regard to the recommendations of Dr. Bowditch, it may be said that they contemplate important changes in the present practice of the association in regard to the examination and general supervision of papers before presentation, in the fact of proposing a standing committee to procure scientific papers for the sections, and in the matter of permanent members and the restriction of representation. He also favored some method of stated conference with the Canada Medical Association. In a resolution which he subsequently offered at the last meeting were these important directions to the committee of publication: —

> "First, to publish nothing but that which, after being read at the sections and approved by them, shall have been also submitted to the critical eye of experts, whose names shall be unknown, and whose decision shall be final in regard to the publication of any paper in our volume of transactions. Second, we should declare, as one rule for the guidance of said experts, that no paper should be deemed worthy of publication in our Transactions unless (*a*) it gives something new to medical science, or (*b*) unless it present an analysis or such a new or lucid arrangement of facts, already wholly or in part known, that the profession will be greatly aided thereby."

Upon these points the committee, of which Dr. Davis is chairman, may be expected to furnish a report embodying recommendations requiring and inviting discussion and the careful consideration of the association.

A number of amendments and changes in the by-laws have also been referred for action at this meeting. The amendment proposed by Dr. Samuel C. Busey, of Washington, one of the vice-presidents, involves some radical changes in the plan of organization, and in the membership of the sections. He proposes that permanent members of the association only shall be eligible to election in the sections, and that a list of the members of each section shall be published in the annual Transactions. A committee on essays, of three members in each section, shall examine and pass upon all the essays and debates, with full discretionary power, the committee on publication to print only what these committees respectively recommend.

The committee on nominations in 1877, Prof. S. D. Gross chairman, offered resolutions proposing that an essayist be made one of the annually elected officers of each section, who shall prepare and read in the general sessions of the association papers on subjects related to his particular branch of science.

The titles of the papers to be offered at the meeting in Buffalo will probably be presented in our next issue, but there is nothing to warrant the suspicion that the sections will be less well attended or their discussions less interesting than last year. On the contrary there is every promise of an unusually good session. The invitation extended to the association by the members of the profession in Buffalo was a most cordial one, and guarantees hospitable reception.

DR. LOMBARD'S RESEARCHES.

WE are gratified to learn that Dr. J. S. Lombard, formerly assistant professor of physiology at Harvard, has undertaken some very extensive and minute researches on the temperature of the head, and that a part of the paper has already been communicated to the Royal Society of London by Dr. Bastian. The author proposes to himself: —

"(1.) To find out, as far as possible, the normal relative temperatures of different portions of the surface of the head when the brain is comparatively inactive.

"(2.) To study the effect of different mental states upon the different portions of the surface of the head previously examined in the condition of comparative cerebral inactivity.

"The *ultimate* objects were twofold, namely: —

"(1.) To furnish, if possible, some reliable data as a starting point for examining the temperature of the surface of the head, with a view to assisting in the diagnosis and localization of cerebral disease.

"(2.) To see if, from an examination of the relative temperatures of different portions of the surface of the head during increased mental activity, any information could be obtained as to the comparative importance of the parts played by different portions of the brain in the evolution of thought and the different emotions."

With this object he divides each half of the head into an anterior, middle, and posterior region, and subdivides these into smaller spaces. As yet he has published only his results in the anterior region of the two sides, the brain being inactive. He has made use of the heads of only six individuals, but he has made a vast number of observations, so as to be able to compare the temperature of each space with that of its neighbors and with that of its fellow on the opposite side. One cannot but be struck with the scope of the undertaking, which we hope will reach as successful a termination as the ingenuity and patience of Professor Lombard give us a right to expect.

MEDICAL NOTES.

— In his book on South Africa Mr. Trollope says that the air of Bloemfontein — the capital of the Orange Free State — "is in the highest degree fit for weak lungs," but adds the remark: "It seems to the ignorant as though the doctors were ever seeking in increased distance that relief for their patients which they cannot find in increased skill." "A hard saying, no doubt," says the *Medical Times and Gazette*, "but worth thinking over."

— Ovariotomy was performed for the first time in Europe by Dr. Gaetano Emiliani, of Faenza, in 1815. Dr. Ephraim McDowell, of Kentucky, did his first operation in 1809. In spite of repeated venesections and the loss of half a pound of blood during the operation, Emiliani's patient recovered, and within twelve months bore twins. One ovary had been removed, and this may be seen to-day in the museum of the Medico-Chirurgical Society of Bologna. Spencer Wells discovered this case in an Italian work, L'Ippocratice di Forte' from which he translated it into English.

— From No. 39 of the *Gazette des Hôpitaux* the *Medical Times and Gazette* quotes the distressing case of a soldier, patient in the Military Hospital of Gros-Caillon, who exhibited symptoms of pericardial effusion with disease of the aortic valves, following four attacks of articular rheumatism. The dyspnœa led the surgeons to introduce a No. 1 Potain needle into the third interspace on the left side to a depth of 1.6 inches. No fluid appeared, and on leaving the needle free it oscillated synchronously with the beat of the heart, which had been punctured. The effect was instantaneous; the patient uttered a sharp cry, took one deep inspiration, and was dead. The pericardium was found to be much thickened and adherent to the heart at various points. The needle had passed over one of these and wounded the central organ.

— Dublin is suffering severely from a small-pox epidemic.

— In Hardwicke's Guide to European Universities, it is stated that at Würzburg two rejections either in the thesis or the *vivâ voce* examination are fatal to a candidate's hopes, and that in all Austrian universities three failures at any "rigorosum" disqualify a candidate from ever again presenting himself for examination. In Basle the faculty can decide how soon a candidate may again present himself. In Geneva every candidate is required to conduct an autopsy. In all universities except that at Heidelberg the theses must be printed at the writer's expense. At Heidelberg, however, only those who obtain first honors are *permitted* to print the essay.

— Among the delegates from Philadelphia who have announced their intention to attend the meeting of the American Medical Association are Professors S. D. Gross, John B. Biddle, Wm. Goodell, Wm. Pepper, Henry H. Smith, and Drs. Robt. Burns, N. L. Hatfield, Albert Fricke, H. Lenox Hodge, R. J. Dunglison, Thos. B. Andrews, T. M. Drysdale, J. Solis Cohen, John G. Packard, Albert H. Smith, J. Cheston Morris, M. O'Hara, W. R. D. Blackwood, L. Curtis, W. M. L. Richards, and Frank Woodbury.

— Professor Henry, of the Smithsonian Institute at Washington, is dead.

— Dr. Brown-Séquard is proposed as a successor to Claude Bernard in the chair of physiology in the College of France. He is, however, rendered ineligible by the fact that he is not a naturalized Frenchman.

— In the *Medical Examiner* we read that at a recent meeting of the French "Hospital Society" M. Proust showed the brain of a patient who, many years previously, had undergone amputation of a limb. The corresponding portion of the cerebral hemisphere exhibited a remarkable degree of atrophy.

— M. Guérin, senior surgeon to the Hôtel Dieu of Paris has recently been exhibiting the application of his cotton-wool dressing, by means of which he claims that wounds may be protected from the action of germs which float in the air. The cotton is supposed to act as a filterer of the air. M. Guérin put up a case at St. Bartholomew's Hospital, using five pounds of cotton-wool and over one hundred yards of bandage. In spite of this quantity of material it is affirmed by both English and French surgeons that Guérin's is not only very inferior to the Lister method, but that its results are much less perfect and reliable than those Guérin would claim for it.

— A sack of oats fell upon an English schoolmaster. He sued the proper parties for negligence and for damages on account of injuries received. In court Dr. Broadbent and Dr. Bastian swore that the injuries sustained by the plaintiff were the result of mechanical accident, and irremediable. On the other hand, Mr. Smith, of King's College Hospital, and Mr. Erichsen swore that the injuries were due, not to violence, but to organic brain disease, and that the plaintiff could recover from them within twelve months. A suggestive difference. The verdict awarded £1250 damages to plaintiff.

— Dr. Paul F. Mundé, of New York, was recently elected a corresponding fellow of the Edinburgh Obstetrical and of the Philadelphia Obstetrical societies.

— It has been reported that Professor Hueter has resigned his chair at Greifswald. This is denied by the *Deutsche med. Wochenschrift.*

— Dr. Robert Blessig, physician-in-chief to the eye hospital of St. Petersburg, and an ophthalmologist of renown, died on the 25th of March.

— Dr. Lederer, a naval surgeon, has made observations upon thirteen hundred individuals, and reaches the following conclusions: (1.) Color-blindness in its strictly scientific sense is a very rare occurrence. (2.) People who are not conversant with colors are rather numerous; this should be borne in mind in selecting men for important services with colored signals. It would be incorrect, however, to consider all such persons as subjects of color-blindness. Lederer has an extended paper on this subject in the *Wien. med. Wochenschrift* (Nos. 2 and 4, 1878).

— We would call attention to the advertisement of the prize committee of the alumni of the College of Physicians and Surgeons, New York. The committee has done well in recognizing the necessity of offering a large sum, — five hundred dollars, — but we think it is to be regretted that the prize is limited to the alumni of the college, and not thrown open, like our Boston prizes, to all comers.

— We have received a circular, issued by Surgeon-General Woodworth, of the Marine Hospital service, stating that medical officers of the Marine Hospital service will hereafter, for all official, medical, and pharmacal purposes, make use of the metric system of weights and measures. In expressing quantities by weight the terms "gramme" and "centigramme" only will be used, and in expressing quantities by measure the term "cubic centimetre." The metric system has already, under the act of July 28, 1866, been adopted by this service for the purveying of medical supplies, and the weights and graduated measures, as well as the glassware, hereafter furnished the medical officers will be in accordance therewith.

Simple rules for the ready conversion of terms of the United States apothecaries' weights and measures into their respective equivalents in metric terms are appended, which, for all medical and pharmacal purposes, are believed to afford sufficiently accurate results. Suggestions are also given as to the mode in which metric medical prescriptions might be constructed, and in relation to the preparation of requisitions for medical supplies in metric terms.

— A mutual aid association of the Philadelphia County Medical Society was lately organized at a meeting held at the hall of the College of Physicians. Professor Henry H. Smith presided. The chairman stated the proposed organization was to be a mutual aid association, designed for the purpose of relieving sick and destitute physicians, members of the Philadelphia County Medical Society, and to provide for the support of widows and orphans by the payment to them of annuities. He stated that a similar organization had been for a number of years in operation in New York, and that it was doing a good work in this direction; and a field, he thought, exists among us for such labor, especially at present, as he was cognizant of cases of real distress. A plan for such an association had been already matured by a committee appointed by the County Medical Society, and a draft, with the by-laws, etc., was submitted for approval. A large number of members of the parent association favorable to the new project were present. It was decided to organize immediately, and the following officers were elected for one year: President, Dr. Benjamin Lee. Vice-presidents, Dr. Albert Fricke, Dr. Wm. T. Taylor. Treasurer, Dr. Richard J. Dunglison. Recording secretary, Dr. W. R. D. Blackwood. Corresponding secretary, Dr. Frank Woodbury. Trustees, Drs. Henry H. Smith, N. L. Hatfield, Robert Burns, Geo. Hamilton, M. O'Hara, Wm. B. Atkinson, J. Solis Cohen, Joseph G. Richardson, H. St. Clair Ash.

At the close of the meeting the names of twenty-seven subscribers were announced. The success of the organization is, it is thought, already assured by the unusual and unexpected interest that it has excited from the time of its first suggestion by Prof. Henry H. Smith, in his remarks in January last, upon the occasion of his reëlection as president of the Philadelphia County Medical Society.

MASSACHUSETTS GENERAL HOSPITAL.

SURGICAL CASES OF DR. CABOT.

[REPORTED BY H. L. MORSE.]

Foreign Body in the Trachea. — H. E., a boy of seven years, while playing with a blow-gun on the 26th of last December, sucked down his throat one of the darts. Immediately afterward he had a severe paroxysm of coughing, followed by complete asphyxia for about half a minute; he then had several severe attacks of cough. Some hours after this he had another severe paroxysm. These recurred from time to time during the next few days, but not with sufficient severity to alarm his parents. The cough gradually increased, however, in frequency and duration, but there was little or no disturbance of his general health, and the child played about as if well. The patient entered the hospital on January 10, 1878.

Inspection and palpation of the throat and neck revealed nothing. The breathing was somewhat labored, calling into play to a certain extent the accessory respiratory muscles. There was also a high-pitched whistling sound, apparently situated in the trachea, but auscultation and percussion failed to define the exact position of the obstruction to the breathing. Examination by the laryngoscope showed that the foreign body was not lodged in the pharynx or larynx.

The patient was etherized, and an incision about two inches in length was made by Dr. Cabot in the median line of the neck, just below the cricoid cartilage, and the trachea was opened. A probe was next passed down the right bronchus about six inches, but met with no obstruction; the left bronchus was then explored, and the probe after passing down about five inches seemed to strike an obstacle; forceps of different shapes were then introduced, but failed to bring up the foreign body.

While stopping to give the patient some more ether, the dart suddenly shot upward past the incision with a forced expiration, and disappeared with inspiration; it appeared and disappeared again with the next inspiration and expiration. On the third expiration Dr. Cabot seized it with a pair of forceps, and removed it from the opening in the trachea. A tracheotomy tube was then inserted and retained about four hours. It was then taken out, as the child had fully recovered from the ether and could breathe well by the mouth. The patient's temperature in the evening of the day following the operation rose as high as 102° F., and there was labored respiration, cough, and profuse expectoration; but from that time the temperature and all the other symptoms improved, and he was discharged on January 22d with a small granulating surface on his neck, not communicating with the trachea, still unhealed, but otherwise he was entirely well.

Three Cases of Excision of the Breast Treated Antiseptically. — CASE I. A. C., a young girl twenty-one years of age, entered the hospital with a tumor as large as a turkey's egg in her right breast, the skin over which was adherent and ulcerated from the use of caustics. The tumor was of two years' standing, was movable over the subjacent tissue, and there were no enlarged glands in the axilla. The patient having been etherized, an elliptical incision about six inches long was made by Dr. Cabot, and the whole of the mammary gland was dissected out. The operation was performed under carbolized spray, the vessels were secured with carbolized catgut, and a dressing applied according to Lister's system.

The temperature rose as high as 102° on the evening of the day following the operation; from this point it steadily fell. On the fourth day it was 100°, and never rose above that point again while the antiseptic dressings were applied. The dressings were changed six times during the first twenty-one days after the operation, and at the end of this time the antiseptic dressings were removed. Owing to its previous ulcerated condition a portion of the flap sloughed and healed by granulation.

Microscopical examination showed the tumor to be non-malignant in character.

CASE II. M. J. B., a woman forty-four years of age, reëntered the hospital on January 2, 1878, with a recurrent tumor of the left breast. Four days after her entrance the patient was etherized, an incision ten inches in length was made by Dr. Cabot under carbolized spray, and a tumor about the size of a hen's egg and a dozen glands and small tumors were dissected out from the axilla, and also the scar left by the first operation. The vessels were tied with catgut, and a drainage tube was put into the wound, which was then closed with carbolized gut sutures. A gauze dressing was applied according to Lister's method. The dressing was changed on the first and second days after the operation, and on the latter date the drainage tube was removed. The dressing was changed again on the sixth, seventh, thirteenth, and twenty-third days, and on the twenty-fourth day after the operation the patient was discharged, with the gauze dressing still on, the wound having entirely healed, except a small portion which was granulating healthily. The traumatic curve of the temperature in this case rose as high as 102° on the evenings of the first and third day after the operation, fell to the normal point on the fifth, and did not rise again until the seventeenth day, when it reached 102.2°, on account of a severe attack of tonsillitis.

CASE III. K. F. entered the hospital on January 17, 1878, with multiple chronic mammary tumors of both breasts. At the time of her entrance the mass in the left breast was the size of a small orange, and that in the right was a little larger.

The patient having been etherized, two incisions, each about two inches in length, were made by Dr. Cabot in the right breast, and a tumor a little larger than an English walnut was dissected out from each. A dressing towel wet with carbolic acid having been placed over the wound, three incisions were then made in the left breast, and six tumors of various sizes were removed. The bleeding vessels were secured by carbolized catgut ligatures, drainage tubes were put in, and the wounds closed with carbolized silk sutures.

The operation was performed under carbolized spray, and an antiseptic dressing covering both breasts and completely encircling the body was applied. The patient made a rapid recovery, the wounds in the right breast healing by first intention. The dressings were changed under carbolized spray on the second, eighth, and sixteenth days following the operation. On the twenty-second day the antiseptic dressings were removed, and the patient was discharged, well, twenty-four days after the operation. The temperature rose to 102.2° on the evening of the day following the operation; it then fell to 100°, and did not rise again above that point. The sutures used in this case were of silk prepared with resin, wax, and carbolic acid, and were found to be much better than the carbolized catgut which is commonly used, as they were antiseptic, caused no irritation, and yet were not absorbed, as those of catgut often are, before the edges of the wound are united firmly enough to keep them from tearing apart again.

CONNECTICUT STATE BOARD OF HEALTH.

MR. EDITOR, — The act creating a State Board of Health was finally passed by both branches of the legislature, and having received the sanction of the governor has become a law. The provisions for active work and powers for sanitary investigations are ample and sufficient, and the appropriation of three thousand dollars all that was asked for by those who engineered the measure through the legislature. The secretary of the board is made superintendent of vital statistics, and the State furnishes a room for the meetings of the board and for the bureau of vital statistics thus created. The governor has appointed on the board Dr. J. S. Butler, of Hartford, for many years superintendent of the Retreat for the Insane in Hartford; A. E. Burr, editor of the Hartford *Times;* Prof. C. A. Lindsley, M. D., of the Yale Medical School; Prof. W. H. Brewer, of the Sheffield Scientific School; Dr. Robert Hubbard, of Bridgeport; and A. C. Lippitt, of New London. Three of the board are physicians, and three laymen, one of whom is a lawyer by the provisions of the act. The first meeting for organization was held April 9th, in Hartford. Dr. J. S. Butler was elected president, and Dr. C. W. Chamberlain, of Hartford, permanent secretary. The following committees were appointed: protection of buildings from the gases of decay, A. E. Burr, Professor Brewer; vital statistics, Professor Lindsley, Dr. Chamberlain; state preventive medicine, Dr. Butler; pollution of streams and water supply, Professor Brewer; sanitary legislation, A. C. Lippitt; epidemic, endemic, and contagious diseases, Drs. Hubbard and Chamberlain. The president and secretary were appointed a committee on by-laws and regulations, and plans were matured for securing regular correspondents throughout the State, and the active coöperation of the physicians and medical organizations. The medical profession in Connecticut have been working to secure this measure for many years, and it is to their energy and persistence that success is at last due. Especial credit is given to the committees of the Connecticut Medical Society, and to Dr. N. Mayer, of Hartford, who labored enthusiastically and efficiently for the passage of the bill while in the legislature. The nature and bearings of the measure were fully presented by the Hon. J. L. Houston, of Enfield, and its passage was accomplished by his intelligent and public-spirited advocacy. The State is somewhat late in wheeling into line, being the seventeenth to establish such organizations, following the lead of Massachusetts. The board commences under good auspices, and is backed by a favorable public sentiment, which is constantly growing stronger.

COMPARATIVE MORTALITY-RATES.

	Estimated Population, July 1, 1878.	Deaths during week ending May 4, 1878.	Annual Death-Rates per 1000 living.		
			For the Week.	For the Year 1877.	Mean for ten Years, '68-77.
New York.	1,093,171	469	22.31	23.42	28.71
Philadelphia.	876,118	266	15.79	18.80	21.54
Brooklyn.	549,438	181	17.13	21.51	25.50
Chicago.	460,000	108	12.21	17.83	22.39
Boston.	375,476	144	19.94	20.10	24.34
Providence.	100,000	34	17.68	18.81	19.20
Lowell.	55,798	13	12.12	19.09	22.50
Worcester.	54,937	15	14.20	14.07	22.30
Cambridge.	53,547	16	15.53	18.69	20.83
Fall River.	53,207	16	15.64	21.35	24.96
Lynn.	35,528	8	11.71	20.42	19.67
Springfield.	33,981	6	9.19	16.04	19.77
Salem.	27,140	10	19.16	20.38	21.15

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Essex South District Medical Society. — At the annual meeting held in Salem, April 30th, the following officers were elected: President, A. H. Johnson, of Salem. Vice-President, J. W. Goodell, of Lynn. Secretary, R. F. Dearborn, of Lynn. Treasurer, William Mack, of Salem. Librarian, P. P. Bielby, of Salem.

Books and Pamphlets Received. — Congenital Occlusion and Dilatation of Lymph Channels. By Samuel C. Busey, M. D. New York: William Wood & Co. 1878. Pp. 187.

Smithsonian Miscellaneous Collections. 316. Circular in Reference to American Archæology. Smithsonian Institution, Washington, D. C. 1878.

Bibliothek for Læger. Dr. J. C. Lehmann. Copenhagen. 1877.

Carbolic Injections in the Treatment of Piles. By Prof. A. B. Cook, M. D. (From the American Medical Bi-Weekly.) Louisville. 1878.

Observations in Practice, Surgery, Gynæcology, and especially Obstetrics. By George B. Walker, M. D., Professor of Obstetrics in the Medical College of Evansville. Chicago. 1878.

Suggestions in the Treatment of Spinal Disease an dCurvature. By E. H. Coover, M. D., Harrisburg, Pa.

Clinical Lecture on some Points in the Diagnosis and Treatment of Uterine Polypi. By William Goodell, M. D. Reported by Frank Woodbury, M. D., to the Obstetrical Journal of Great Britain and Ireland. American Supplement.

Two Lectures on Convulsions and Paralysis as Effects of Disease of the Base of the Brain. By Professor Brown-Séquard. Reported to the Philadelphia County Medical Society by Frank Woodbury, M. D.

Report of the Citizens' Committee upon the Nuisances of New York City. The Air we Breathe. New York. April, 1878.

Studies in Pathological Anatomy. By Francis Delafield, M. D., Adjunct Professor of Pathology and Practical Medicine, College of Physicians and Surgeons. No. 3. April, 1878 New York: William Wood & Co. 1878.

Objections to the Use of Carbolic Acid in the Treatment of Piles. By J. M. Mathews, M. D. (From the American Medical Bi-Weekly, April 27, 1878.)

Auto-Inoculation of Vegetable Parasites of the Skin, and the Clinical Testimony for their Identity or Non-Identity. By Edward Wigglesworth, M. D. (Archives of Dermatology.)

Faulty Innervation as a Factor in Skin Diseases. By Edward Wigglesworth, M. D (The Hospital Gazette.)